



Institute of Medicine Report Amyotrophic Lateral Sclerosis in Veterans: Review of the Literature

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Institute of Medicine Report: ALS in Veterans

- On November 10, the Institute of Medicine (IOM) published a report, entitled *Amyotrophic Lateral Sclerosis in Veterans: Review of the Literature*.
- Report is accessible on the National Academy of Sciences web site. (www.nas.edu)
- The Department of Veterans Affairs requested this review because some epidemiology studies suggested a link between military service and the later development of ALS.



Gulf War and Health, Volume 4: Health Effects of Serving in the Gulf War (IOM, September 2006)

- In its September report, IOM did not recommend that further medical studies be performed in Gulf War veterans, in general terms. Instead, they recommended quite targeted follow-up studies.
- IOM recommended that continued surveillance be performed for specific health outcomes:
 - Cancer (due to delay in onset for 15 to 20 years after exposure)
 - Amyotrophic Lateral Sclerosis (ALS)
 - Birth defects and other adverse pregnancy outcomes
 - Psychiatric illnesses
 - Mortality



Institute of Medicine Report: ALS in Veterans

- ALS is an extremely rare, severe neurological disease, which is also called Lou Gehrig's disease.
- ALS causes degeneration of the nerve cells in the brain and spinal cord that control motor function.
- This eventually leads to muscle paralysis and respiratory failure.
- In the general US population, approximately 5-10% of ALS cases are inherited.
- The causes of the remaining cases are unknown.
- There are no effective treatments.



IOM Review of 5 ALS Studies

- IOM identified 5 studies that evaluated the association of military service and the later development of ALS.
- IOM reported that one high-quality, national study found a significant association between military service during 1910 to 1982 and later development of ALS.
(Weisskopf, et al., 2005)
 - Rate of ALS was 1.53 times higher in veterans than the rate in men who had not served. This suggested that military service might be associated with an increased risk of ALS.
 - Rate of ALS was significantly increased in veterans of World War II, but not in veterans of Korean War or Vietnam War.
 - DoD has funded a continuation of this study.



IOM Review of 5 ALS Studies (continued)

- IOM reported that one national study of Gulf War veterans, which was jointly funded by DoD and VA, was generally well-conducted.
 - Reported an increase in the rate of ALS in veterans of the 1991 Gulf War (1.92 times higher), compared to non-deployed veterans. (Horner, et al., 2003)
 - VA has funded a continuation of this study.
- IOM reported that 3 studies of Gulf War veterans had several methodological limitations that made them less valuable for IOM's evaluation.



Possible Risk Factors for ALS

- Because the current evidence is too sparse to make definitive conclusions, IOM recommended that more research be conducted.
- IOM identified a preliminary list of possible risk factors for ALS that were relevant to military service, including:
 - intensive physical activity
 - traumatic injuries
 - infectious diseases
 - occupational & environmental exposures such as lead



IOM Conclusions

- The overall IOM conclusion was:
 - “There is limited and suggestive evidence of an association between military service and later development of ALS.”
- In response to this report, the Secretary of the VA will release a determination on whether or not a presumption of service connection is warranted for ALS in veterans.